

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT:NREL

STATE: CO

PROJECT TITLE : Wind Resource Study for US Army at Kwajalein Atoll; Marshall Islands; NREL Tracking No. 14-005

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-14-005	GO28308

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

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| A9 Information gathering, analysis, and dissemination | Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.) |
| B3.1 Site characterization and environmental monitoring | Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7. |

Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) proposes a project in support of United States Department of Army (U.S. Army) for a wind energy resource assessment at the U.S. Army Kwajalein Atoll (USAKA) installation in the Republic of Marshall Islands (RMI), approximately 2,100 nautical miles southwest of Honolulu, Hawaii. The U.S. leases eleven islands from the RMI government for radar, optics, telemetry, and communications equipment that provide instrumentation for ballistic missile and missile interceptor testing as well as space operations support.

PROPOSED ACTION

The proposed project would include the installation and operation of a meteorological (met) tower at the USAKA facility on Carlos Island within the Kwajalein Atoll at approximately 8.8000 deg. latitude and 167.6139 deg. longitude. The proposed met tower site is an existing cleared space adjacent to other existing U.S. Army antennas, towers, and other infrastructure. Maps depicting the proposed met tower location are uploaded to the PMC database. Data collected from the met tower would be used by NREL to develop a feasibility study on the wind energy potential at the U.S. Army installation. The met tower would be delivered by boat, and then transported by pickup truck to the proposed site. Transportation would be along existing boating lanes, use existing docks, and existing roads on the island. The tilt-up tower would be assembled on the ground, and would be then raised using a gin pole and hydraulic winch. The tower would be 60 meters (198 feet) high and would include sensors and data loggers. The tower would be supported by a 4' x 4' steel base plate, and would be supported by 12 guy wires anchored to buried dead-man type concrete blocks. If it is not possible to attach the winch to a backhoe or other heavy equipment already on the island, an additional concrete anchor of similar size for the winch may be installed. The tower would be self-powered and include satellite communication and no trenching for utilities would occur.

It is anticipated that the proposed tower would be erected in July 2014. Data would be collected continuously by satellite modem from the equipment on the tower for twelve months, and NREL's analysis of the data is expected to be completed by approximately November 2015. The met tower would be the property of the U.S. Army, and would be removed after 12 months for scrap or redeployment. Work would be conducted by NREL's subcontractor, KB Energy, and supported with personnel from U.S. Army's support contractor at Kwajalein.

OTHER FEDERAL AGENCIES NEPA REVIEWS

The proposed project would occur at an U.S. Army military installation and would be funded by the U.S. Army. The U.S. Army completed Environmental Checklist ESH-NEP-14-05 documenting their environmental review and NEPA determination for this proposed action in accordance with the U.S. Army's NEPA implementing regulations at 32 CFR 651. The U.S. Army determined that there are no exceptional circumstances associated with the proposed project and that it fit into the class of actions for their categorical exclusion c(1). A copy of ESH-NEP-14-05 has been uploaded to the PMC.

IMPACTS OF PROPOSED ACTION

The proposed project would occur at an existing U.S. Army installation in an area that has been previously disturbed and cleared. The met tower would be a guyed tower with 3 guy wires per cardinal direction for a total of 12 guy wires. Each guy wire would be anchored by a buried dead-man type concrete block requiring a 3ft wide x 9ft long x 4ft deep excavation. Additionally, a concrete anchor for the winch may be required of the winch cannot be attached to a backhoe or other piece of heavy construction equipment. Total amount of soil to be disturbed is estimated to be approximately 25 cubic yards. The topsoil would be stockpiled nearby, and the spoils would be used to backfill over the concrete blocks. No additional excavation is anticipated. For all construction activities in USAKA, the U.S. Army requires stormwater management controls, and all project personnel would be required to adhere to the USAKA Stormwater Pollution and Prevention Plan and to DEP-06-002.1 Point Source Discharges requirements as appropriate. While vegetation removal is not expected to be a part of the proposed activities, any trimming or removal of vegetation would be done in accordance with U.S. Army Standard Practice Instruction (SPI) SPI 1273 – Removal and Care of Vegetation, which is uploaded to the PMC database.

The Marshall Islands, a former U.S. territory, are within the jurisdiction of the National Historic Preservation Act and has a Historic Preservation Office (HPO). This proposed project would abide by agreements between RMI and U.S. Department of Defense, and the USAKA Historic Preservation Plan (HPP). The U.S. Army's environmental support contractor conducted a Cultural Resources Evaluation Checklist (ENY-12-148), which is uploaded to the PMC database. The U.S. Army determined that proposed action is bounded by the USAKA HPP and therefore consultations with the Marshall Islands HPO are not required. The U.S. Army would require a dig permit for earth disturbing activities associated with the proposed project since cultural resources are known to occur on the island, although archaeological, historic, or cultural resources are not expected within the footprint of the proposed project site. A condition of the dig permit would include that an archaeologist would be present to monitor proposed excavations.

The tower would be equipped with a single red, low intensity, flashing light operating at night per requirements from the U.S. Army, which is consistent with the U.S. Fish & Wildlife Service's Interim Guidelines for Recommendations on Communications Tower Siting, Construction, Operation, and Decommissioning. Also, the U.S. Army would require that the outer guy wire on each direction be equipped with a 21-inch orange marker ball. This would help demarcate the outer guy wires from avian impact in accordance with the Avian Power Line Interaction Committee's 2012 Reducing Avian Collisions with Power Lines guidelines. Additionally, wildlife or habitat interactions for this proposed project would be compliant with the U.S. Army's Standard Practice Instruction (SPI) 1580 Threatened, Endangered, and Protected Species. The U.S. Department of Energy initiated informal consultations with the U.S. Fish & Wildlife Service for potential impacts to avian species as well as threatened and endangered species under Section 7 of the Endangered Species Act on February 28th, 2014. The U.S. Fish & Wildlife Service concurred on April 4th, 2014 that the proposed temporary meteorological tower would not pose an unreasonable risk to seabirds or terrestrial birds. The U.S. Fish & Wildlife Service also concurred that the proposed precautions and controls would be adequate to prevent a take or harassment of threatened, endangered and protected species. Copies of this correspondence are uploaded to the PMC database.

The Marshall Islands are not under the jurisdiction of the U.S. Coastal Zone Management Act, nor would this project impact prime farmland, wetlands, and floodplains.

Impacts to air quality from the proposed project would be negligible. The proposed project is short-term and temporary, and would involve the short-term and/or intermittent use of mobile sources of air emissions including an ocean-going vessel to deliver the met tower equipment to the island, and a pickup truck to transport the equipment to the proposed monitoring site. Additionally, a backhoe or similar construction equipment would be used to excavate the holes for the met tower concrete anchors. The proposed action would not involve the use of stationary point sources of air emissions, and the proposed site is not located in a non-attainment area.

The met tower would be owned by the U.S. Army, and it would be removed at project completion for scrap or redeployment. If the Army were to determine that the met tower would be scrapped, the material would be handled in accordance with the Army's SPI 1264 Solid Waste Segregation, Storage, and Collection Plan. This would be true for other potential solid waste generated during the installation and operation of the met tower. The use of hazardous materials would be extremely limited and no hazardous waste generation is anticipated.

Assembly and installation of the proposed met tower, and operation of heavy equipment would be done by an NREL subcontractor (KB Energy), and supported by personnel from KRS, the U.S. Army's support contractor at USAKA. All work would be done in accordance with the U.S. Army's safety and health policies and procedures, including Standard Practice Instruction No. 1436 R1 Hazard Communication Program.

NEPA DETERMINATION

Pursuant with 10 CFR 1021.102(b), DOE's NEPA implementing regulations do not technically apply to DOE or NREL actions having environmental effects outside the United States, its territories or possessions. Instead DOE or NREL actions having environmental effects outside the United States are subject to Executive Order 12114, Environmental Effects Abroad of Major Federal Actions and DOE guidelines implementing EO 12114 (46 FR 1007). This action is exempt from further review under EO 12114 per Section 5.1.1 (Actions not having a significant effect on the environment outside the US) of the DOE EO 12114 implementing guidelines.

Based upon the information above, DOE has determined that this proposed action would be consistent with the actions contained in DOE categorical exclusions A9 "Information Gathering, Analysis, and Dissemination," and B3.1(h) "Installation and Operation of Meteorological Towers and Associated Activities (Such as Assessment of Potential Wind Energy Resources)."

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

ND created by Rob Smith on 4/9/2014.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

NEPA Compliance Officer

Date: _____

4/9/2014

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- ☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- ☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____